

REMARKS

Claims 2-3, 5, 7, 13, 18-22, 24-25, 33 and 34 are pending. Claims 7 was rewritten in independent form and claims 18 and 21 were amended to more particularly point out and distinctly claim the present invention. Claims 1 and 23 were canceled in the present Amendment. Withdrawal of all rejections of the pending claims is respectfully requested for at least the reasons set forth below.

Prior art rejections

Claims 1-3, 7, 13, 18-25, 33 and 34 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No. 2005/0035775 (Zhou et al), hereafter "Zhou." Withdrawal of all prior art rejections as they pertain to the amended claims is respectfully requested for at least the following reasons.

1. Patentability of independent claims 7, 18 and 21 over Zhou

Amended claim 7 reads as follows:

7. A probe module comprising:
a probe base having a plurality of conductive metal traces;
a plurality of probe pins attached to the probe base, each of the probe pins comprising an elongated body wherein at least part of the elongated body is bonded to the plurality of conductive metal traces of the probe base;
a circuit interconnect device for connecting the plurality of probe pins to an inspection apparatus; and
a compression arm attached to the probe base and configured to engage the plurality of probe pins. (underlining for emphasis)

Amended claim 18 reads as follows:

18. A probe pin for a probe module having a probe base including a compression arm, comprising:
a probe pin body that is elongated and has at least a portion bonded to a conductive metal trace of a the probe base;
a probe pin head extending from the probe bin body; and
a probe pin tip provided on the probe pin head; and

the compression arm being attached to the probe base and configured to engage the probe pin. (underlining for emphasis)

Amended claim 21 reads as follows:

21. A probe module comprising:
a probe base having a plurality of conductive metal traces, the probe base being defined by a first end and a second end;
a plurality of probe pins electrically connected to the conductive metal traces of the first end of the probe base; and
a flexible circuit board electrically connected to the conductive metal traces of the second end of the probe base, thereby allowing the plurality of probe pins to be electrically connected to the flexible circuit board via the plurality of conductive metal traces; and
a compression arm attached to the probe base and configured to engage the probe pins. (underlining for emphasis)

One preferred embodiment of a compression arm that is attached to a probe base and configured to engage probe pins is shown in Fig. 9 of the present specification.

The Examiner asserts that (1) the claimed compression arm is the same, or equivalent to, Zhou's pogo-pins 141 as shown in Fig. 3, and (2) the pogo-pins 141 are attached to a probe base 200 and engage a plurality of probe pins 30.

Applicants respectfully disagree with both assertions. Zhou does not disclose or suggest that a compression arm is attached to a probe base, or that a compression arm is configured to engage a plurality of probe pins. The pogo-pins 141 are not the same or equivalent to the compression arm of the present invention. The pogo-pins 141 are "spring-loaded" contact pins and do not engage (in a compressive manner) the contactors 30 that the Examiner equates to the plurality of probe pins. Furthermore, the pogo pins 141 are attached to a pogo-pin block 130, which is not the same or equivalent to the probe base that the Examiner identifies as element 200 in Fig. 3. Zhou describes the pogo-pins 141 in detail in paragraph [0005] on page 1, which reads as follows:

[0005] The pogo-pin block 130 is mounted on an upper surface of a frame (not shown) of the substrate handler 400. A large number of pogo-pins 141 are mounted on the pogo-pin block 130. As is well known in the art, a pogo-pin is a compressive contact pin having a spring therein. The pogo-pin block 130 is to accurately hold the pogo-pins 141 relative to the probe

card 170 and the substrate handler 400. In the substrate handler 400, a semiconductor device, such as a semiconductor wafer 300 to be tested is mounted on a chuck 180. (underlining for emphasis)

In summary, Zhou does not disclose or suggest the claimed compression arm attached to a probe base which is configured to engage probe pin(s), as recited in the amended independent claims 7, 18 and 21. Zhou merely discloses that pogo-pins 141 are mounted to a pogo-pin block 130, which is not the probe base that includes any probe pins. Therefore, in view of the above differences, amended independent claims 7, 18 and 21 are believed to be patentable over Zhou.

2. Patentability of dependent claims

The dependent claims are believed to be allowable because they depend upon respective allowable independent claims, and because they recite additional patentable steps and elements.

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Conclusion

Insofar as the Examiner's rejections were fully addressed, the instant application including claims 2-3, 5, 7, 13, 18-22, 24-25, 33 and 34 is in condition for allowance. A Notice of Allowability of all pending claims is therefore earnestly solicited.

Respectfully submitted,

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(Date)

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